of them have probably undergone. That pillars were used to support the roof-timbers is the more probable, as it appears that the apartments were lighted from above by apertures in the roof, which would interrupt the continuity of the timbers, and render immediate supports absolutely necessary. It may be asked, why assume that the Assyrians were ignorant of framed trusses, by which the widest spans might be roofed over without the assistance of intermediate supports? We cannot prove the non-existance of trusses, but we certainly have no evidence that such artificial contrivances are of this remote date. We see no indication whatever of pitched roofs in any of the sculptures before us, nor, I believe, at all in Egyptian architecture. Even in the Lycian examples we do not find, until we come down to the Greek period of art, any example of a pediment, which is but the gable end of a pitched roof. These Assyrian palaces, then, had, as I presume, flat, terraced roofs, as we know the Egyptian buildings had: it is the present fashion of the East, and that it has ever been so there is abundant proof in the Scriptures. It was a law of the Jews that no roof should be built without a parapet, so that those walking thereon might be rendered safe. In the sculpture before us are various representations of small domestic buildings; they have no sloping roofs, but are rounded at top, as if formed of slight timbers bent round, which were probably wattled over and covered with mud like the wigwams of the present day. The pavilion-roof, to which I have already adverted, appears to have had its covering stretched over similarly bent timbers. It does not seem improbable that the curved and pointed roofs of the Lycian tombs own a similar type, and are a marble version of a roof of bent timbers.

Dr. Layard discovered no indications of windows in any of his excavations; but that windows were used in Assyrian architecture is proved by the representation of them occurring in many of the slabs: nor can we imagine any other mode of gaining daylight in the lower rooms when buildings were of several stories in height, which, by these bas-reliefs, appears to have been the case. These windows are square-headed, generally, and have the peculiarity of a double or rebated external reveal, by which means, like the splay in Gothic architecture, additional light was gained, the actual apertures being narrow. This square sinking in the jambs of a window is, I believe, without a parallel in Egyptian architecture, and is not seen in purely Greek buildings; but it is singular that this is a feature pervading the very ancient tombs of Asia Minor, recently made known to us: many instances of it occur in the Xanthian marbles at the British Museum. Whatever may be the date of the marbles from Xanthus, they certainly appear to be a very remarkable link between Greek art and some other very different, pre-existing style.

The occurrence of circular-headed openings in the fortified buildings of Assyria, as plainly represented on these bas-reliefs, dissipates at once all ideas formerly pretty generally entertained of the comparatively recent discovery of this principle of construction. Dr. Layard mentions a brick vaulted chamber which he brought to light among the ruins at Nimrood, and other similar discoveries are reported to have been still more recently made by him. It seems a reasonable conjecture that the arch may have been first used in an alluvial country like that part of Assyria, where abundance of bricks were made, and where the difficulty of transporting from remote distances large blocks of stone, fit to form a straight lintel over a wide bearing, would render the substitution of an arch turned with bricks, or small stones, peculiarly convenient.

We may notice that tubular drain tiles were used in removing the rain water that fell through the openings in the roofs on to the pavements of the several apartments. That so obvious and simple a contrivance should have been resorted to by a people possessing great dexterity in the fabrication of fictile ware, and living in a district where the common soil of the country furnished the materials to their hand, seems so natural as scarcely to justify more than a passing remark; yet, is it not curious, that now, in the nineteenth century, and in England, a tubular draining tile is one of the most recent of novelties?

A thin stratum of bitumen is mentioned by Dr. Layard as occurring under all the floors, and passing, as he observed, under those sculptured slabs of alabaster with which the inner face of the walls was lined. He was unable to account for this, but the architect will at once perceive that this was a precaution taken to prevent the damp from arising from the earth under the pavement, and destroying the paintings, and endangering eventually the alabaster itself.

Reverting again to the representations of Assyrian castles on the slabs before us, I must not omit to call your attention to the crenellated parapets having battlements generally pointed or notched, as if to facilitate the use of the bow and arrow. Here also we find an analogous case in the friezes of the Lycian temple, discovered by Sir Charles Fellows, and now deposited in our museum. Castles are there represented with embattled parapets very similar to those in Assyria, and not unlike examples still subsisting in the east.

It has long been a subject of speculation what style of architecture characterized the first temple of Jerusalem. I think that it may be not unreasonably presumed, that the magnificent ruins now brought to light, after an interment of two or three thousand years, afford us a far better clue than any we have ever yet possessed: a much more intimate connection existed, both geographically and politically, between the inhabitants of Palestine and the people of Assyria and Babylonia, than with the Egyptians, from whom they were separated by the Arabian desert. Perhaps, too, the marbles under discussion will be admitted as evidence of an earlier civilization of art among the former people, and therefore of their greater influence in matters of taste. We have indeed the evidence of the Scriptures that Solomon sought his artists—his "cunning workmen"—in the region north of Judæa: Hiram of Tyre was his worker in metals, and his best carpenters were Sidonians.

With how deep an interest, then, these considerations seem to invest the sculptures from Nimrood! When, to use the eloquent words of Dr. Layard, we reflect that "before these wonderful forms, Ezekiel, Jonah, and others of the prophets stood, and Sennacherib bowed; that even the patriarch Abraham himself, may possibly have looked upon them,"—that works of such extraordinary interest and value should, after the lapse of thousands of years, have found their place in our national repository, is indeed a matter of just pride and congratulation, and I cannot forbear to express a confident hope that no exertion may be wanting on the part of our rulers, and of the nation generally, to second the indefatigable zeal of our countryman in securing for us a still farther accession to this most important collection.

SYDNEY SMIRKE.

## THE LIGHT AND HEALTH TAXES.

THE efforts of those who desire to abolish the abominable window duty should not be relaxed. Although passed over by Sir Charles Wood, the cause is not hopeless. We have reason to believe that the Board of Health have, both before and since the Budget speech, made some very stringent representations on the subject, and we are satisfied that there may be a modification.

Petitions should be sent to both Houses, and no exertions spared to get rid of a tax injurious to architectural progress, health, and morals.

The report of a committee of the Metropolitan Sanitary Association, appointed to inquire into the condition of the dwellings of the poor, the causes which have led to it, &c., states,—"That the health of the people being greatly dependent on an ample supply of light and air, the window-tax has had a tendency to diminish that supply, and to cause the erection of badly lighted and imperfectly ventilated houses;"—a milk-and-watery expression on this important point, not at all likely to advance the association in the opinion of real sanitary reformers. If they would prove they are in earnest, they should forthwith send a petition to Parliament for the immediate abolition of the health and light tax.

The City Commissioners of Sewers, in reporting on Mr. Simon's reports last week, speak much more plainly and properly. They say,—"We cannot pass this subject without recording an opinion that the operation of the window-tax is directly opposed to the sanitary interests of the population of the city, and that its continuance must, in a great degree, neutralize the effect of those exertions which your hon. court is making for the purposes of sanitary improvement. We find that it affords inducements to the construction of houses with defective supply of light and air; that it opposes great obstacles to the improvement of such houses as have already been constructed on a faulty principle; and that these circumstances tend to aggravate the frequency and malignity of epidemic diseases, and to increase the mortality of the population."

Again we say, PETITION.

## BRITISH ARCHÆOLOGICAL ASSOCIATION.

AT a meeting on the 27th ult., Mr. T. J. Pettigrew, V.P., in the chair, Mr. C. R. Smith exhibited various bronze ornaments, found during some excavations in Woolmer Forest, Hants. Mr. M. A. Lower exhibited an instrument in bronze, formed by the entwining of grotesque animals, which appears to have been the handle of a knife. Mr. J. Thompson exhibited a gold Roman coin of the lower empire, recently found among some earth which had been removed from the centre of the town of Leicester to the outskirts. It consists of two plates of metal, the edge of one plate overlapping the other.

Other exhibitions having been made, Mr. Cuming read a paper, on the glazed tiles of Alhambra and the east. He showed many points of resemblance between the tiles used in the Moorish buildings of the thirteenth and fourteenth centuries, and those found in Christian buildings of a later period, and he suggested that these two deadly enemies were not ashamed to borrow from each other ideas by which to ornament their religious edifices. Mr. J. Thompson forwarded an account of some interesting researches on the hitherto unknown site of the Abbey of St. Mary, near Leicester, lately undertaken by some spirited individuals in the neighbourhood. He found a large number of encaustic tiles. Sketches of one bearing the arms of the early earls of Leicester (the founders of the abbey), and another bearing a crowned head, were exhibited. This abbey was the burial-place of Cardinal Wolsey.

A communication was read from Mr. J. Rooke and Rev. W. Pattinson, describing an entrenchment near the line of the Roman wall from Wallsend to Bowness, two miles from Dykesfield, and called Fauldsteads. It consists of two enclosures, and appears to have been originally of Roman construction, but used afterwards as a refuge for flocks, &c., from the incursions of the borderers. They also forwarded a drawing of a portion of a Roman altar found in the neighbourhood. Communications were received from Mr. C. Ade, of Alfriston, detailing the discovery of a Roman road between Lewes and Pevensey Castle; and from Mr. J. G. Lowe, of St. Alban's, describing further researches near the theatre discovered at Verulamium.

CAMBRIDGE "ORDERS OF ARCHITECTURE."—A handbill notification of a pleasure excursion to Cambridge, by the Eastern Counties Railway, sets forth, that "those disposed for the trip will have afforded them the beautiful scenery and *splendid orders of architecture of that classic city*, comprising, among other views, King's College, Trinity College," and other beauties too numerous to mention within the limits of a small bill, as Sylvester Daggerwood says. If we had not the fear of our admirable friend *Punch* before our eyes, who, jealous when we fall into a joke, calls THE BUILDER his "facetious contemporary," we should venture to suggest that the writer of this handbill had heard of persons taking "orders" at Cambridge, and thought his visitors would of course expect to see what these were. He evidently had no clear understanding of what he was writing about,—and this is the point, joking apart, which leads us to note the nonsense. Strange to say, no one feels ashamed of knowing nothing about architecture.

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